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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,789	01/31/2006	Jean Armiroli	DKT03188 (0309.4063.901)	7731

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EXAMINER	
SCHNEIDER, CRAIG M	
ART UNIT	**PAPER NUMBER**
3753	
MAIL DATE	**DELIVERY MODE**
10/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/566,789	ARMIROLI ET AL.	
	Examiner	Art Unit	
	CRAIG M. SCHNEIDER	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-24 and 28-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *51,52 and 56* is/are allowed.

6)☒ Claim(s) *15-21,23,28-50 and 53-55* is/are rejected.

7)☒ Claim(s) *22 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 April 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 15-21, 23, 28-34, 46-50, and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Krüger et al. (WO98/45594).

Krüger et al. disclose a delivery system for a fluid which may be used to attain a desired pressure and discharge rate of the fluid, the system comprising a control valve (10) having a valve body having an inner bore (70) generally defined by a bore axis, a valve inlet (35), and a valve outlet (36); a spool member (53) at least partially interposed within the inner bore and moveable therein generally along the bore axis; a biasing member (17 and 60) for biasing the spool member within the inner bore; a force exerting portion (72) for axially moving the spool member within the inner bore; and a flap device (51 and 50) including a flap inlet (38) defined by an inlet flap outer conduit and an inlet flap inner conduit, wherein the biasing member, in a first valve configuration as depicted in Figure 5, permits the flap device to open when pressure within the inlet flap outer conduit reaches a first pressure, and prevents the flap device from opening until pressure within the inlet flap outer conduit reaches the first pressure, and the biasing member, in a second valve configuration (which would correspond to moving the valve downwards in Figure 5), prevents the flap device from opening when pressure within the inlet flap outer conduit reaches a second pressure, wherein the spool member, in a third valve configuration, directs the flow of a fluid from the valve inlet to the valve outlet

when a biasing force imposed by the biasing member is sufficient to prevent the flap device from opening after pressure within the inlet flap outer conduit has reached an operating pressure; and a fluid pump (1) having a pump inlet (23) and a pump outlet (26), wherein the pump inlet is in fluid communication with the valve outlet (see translation (page 4, line 13 to page 15, line 26)).

Regarding claim 16, wherein the flap inlet is generally defined by a flap axis, and the flap axis is generally co-axial with the bore axis as can be seen in Figure 5.

Regarding claims 17, 31, and 32; wherein the force exerting portion includes an electromagnet (72).

Regarding claim 18, wherein the electromagnet current is 0 or near 0 amps when the valve is in the first valve configuration (the unenergized state as seen in Figure 5).

Regarding claim 19, wherein the electromagnet current is between 0 amps and a threshold value when the valve is in the second valve configuration (this occurs when the magnet is moved from the rest position).

Regarding claims 20 and 21, the functional limitations are capable of being performed by Krüger et al.

Regarding claim 23, wherein the flap device includes a seat (49) surrounding a flap orifice that defines a boundary between the inlet flap outer conduit and the inlet flap inner conduit, and a ball (50) that selectively contacts the seat to prevent the movement of fluids through the seat.

Regarding claim 29, the system further comprising a pressure sensor (9) for detecting the pressure of the fluid within a portion of the delivery system downstream of the pump.

Regarding claim 30, the system further comprising a control unit (6), wherein the control unit supplies power to the force exerting portion in response to a preselected pressure detected by the pressure sensor.

Regarding claim 33, wherein the pump outlet is in direct fluid communication with the inlet flap inner conduit such that the flap device may regulate the pressure output of the pump within a portion of the delivery system as can be seen in Figure 1.

Regarding claims 34 and 47-50, the apparatus of Krüger et al. is capable of performing the functional limitations as claimed.

Regarding claim 55, wherein the spool member has a peripheral recess (54) communicated between the valve inlet and the valve outlet when the spool member is in the third valve configuration, and a portion of fluid leaks from the valve inlet to the valve outlet when the peripheral recess is spaced apart from the valve inlet or the valve outlet. The valve has numerous positions during its travel from one point to another point. Right before the recess is completely past the outlet the fluid would leak from the inlet to the outlet.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krüger et al. in view of Kelly (2004/0123841).

Krüger et al. disclose all the features of the claimed invention except that the first pressure in the system would be about 20-30 bar and that the second pressure would be the operating/idle pressure which is about 70 bar. Kelly discloses that the first pressure in the system would be about 20-30 bar and that the second pressure would be the operating/idle pressure which is about 100 bar (paragraph 2).

It would have been obvious to one of ordinary skill in the art to have the system of Krüger et al. function at the first and operating/idle pressures as disclosed by Kelly, since the first and operating/idle pressure as disclosed by Kelly are standard to a rail system.

5. Claims 43-45, 53, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krüger et al. in view of Good et al. (3,193,250).

Krüger et al. disclose all the features of the claimed invention except that the flap device is axially adjustable relative to the inner bore such that a biasing force exerted by the biasing member on a portion of the flap device may be adjusted. Good et al. disclose an axially adjustable closure member (16) such that the closing force exerted by the biasing member may be adjusted (col. 2, lines 45-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the adjustable valve seat of Good et al. onto the flap device of Krüger et al., in order to improve the lifetime seating characteristics (col. 1, lines 9-12).

Regarding claims 43-45, the claims are clearly obvious in view of the combination of Krüger et al. and Good et al.

Allowable Subject Matter

6. Claims 51, 52, and 56 are allowed.

7. Claims 22 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 8/7/09 have been fully considered but they are not persuasive.

9. In response to applicant's argument that in the first position the biasing member prevents the flap device from opening until pressure within the inlet flap outer conduit reaches the first pressure and that the spool member in a third position would increase the biasing of the flap device to further close the flap device can not be accomplished by the Krüger et al. reference, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

10. The intended use limitation of the first valve configuration is met because after the drain line drains the biasing member would close the valve after the pressure in the drain line drops below the spring force. Further the movement of the valve element from the solenoid has numerous positions from one extreme to the other extreme of the

movement. The solenoid therefore can put the valve element in a position to satisfy the intended use limitation of the second configuration and then continues to further open the valve to a third configuration that would satisfy the third configurations intended use limitation.

11. The applicant is requesting that the examiner provide reasoning for the rejection of the various intended use limitations. The examiner has clarified these above. The applicant's reference to MPEP 2112 IV would apply if the valve of Krüger et al. was not capable of performing the intended use but the valve of Krüger et al. has all the structural limitations and is capable of performing the intended use therefore the examiner has met his burden of meeting the claim limitations. Section 2112 IV is directed to a device that is "not" capable of performing the functions or a device that does not disclose all the structural limitations as claimed, both of these situations do not apply.

12. The applicant is also arguing that the Good et al. reference fails to disclose an axially adjustable seat. The examiner disagrees and would like to direct the applicant to col. 2, lines 29-31, which further states that number of washers can vary which means that the valve seat would therefore be adjustable in the axially direction. This changing of the number of springs would adjust the biasing force of biasing member of the valve that contacts the valve seat.

13. In response to applicant's argument that per the combination of Krüger et al. and Good et al. the valve seat of the combination would not be adjustable, the test for obviousness is not whether the features of a secondary reference may be bodily

incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

14. The applicant is arguing that the valve seat of Krüger et al. in combination with Good et al. lacks the threaded limitation of claim 44. The examiner disagrees and directs the applicant to the figure of Good et al. which clearly shows that the lock nut (part of the valve seat assembly) is threaded to the valve element. This is part of the combination of the two references and therefore the claim limitation of the valve seat member being threaded to the valve body is met.

15. The applicant is arguing that the functional limitations of claim 45 are not met by the device of Krüger et al. and Good et al. in combination. The examiner respectfully disagrees. The force exerting portion (72) would increase the pressure to the biasing member and would also apply a biasing pressure to the pressure valve to close the pressure valve when the main flow valve is opened. At the time the main flow valve opens the pressure exerted on the pressure valve would be above the opening pressure of the system otherwise the valve as disclosed by Krüger et al. in combination with Good et al. would not be capable of providing flow to the rail.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG M. SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. M. S./
Examiner, Art Unit 3753
October 21, 2009

/John Rivell/
Primary Examiner, Art Unit 3753